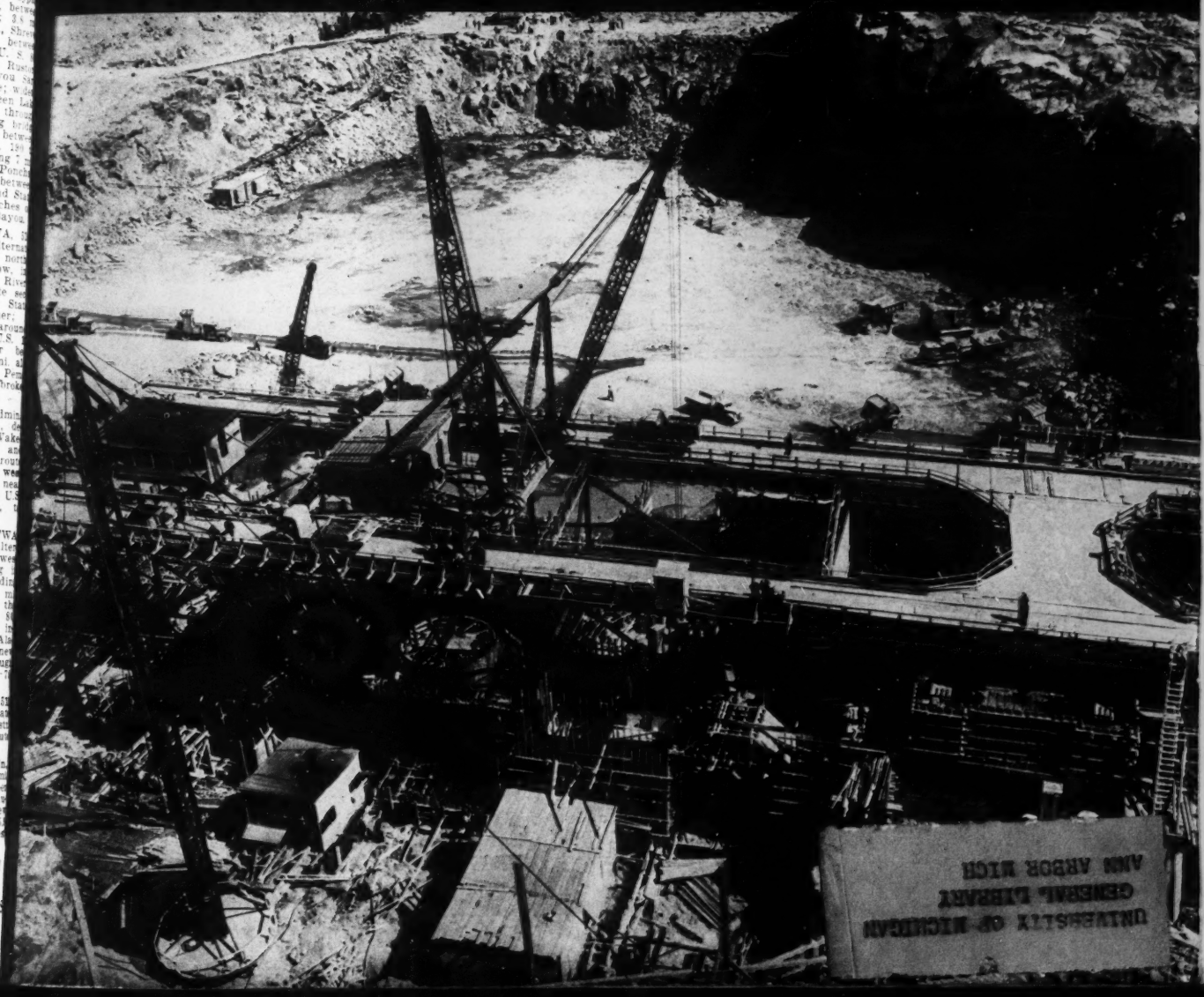
ENGINEERING NEWS-RECORD

Powerhouse foundations for Canada's great new Shipshaw development



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The Week In Engineering and Construction

INEERING NEWS-RECORD • MARCH 18, 1943 • VOLUME 130 • NUMBER 11

RPB reports on postwar sed to prod Congress

esident urges full consideration "this session" of commendations in reports on war-to-peace transition d on security, work and relief policies

ing notice on Congress on how nks it should tackle postwar plan- President Roosevelt transmitted legislators on March 10 two re- of his National Resources Plan- Board which contain sweeping mendations for political and eco- reform. The reports are signifi- n definitely bringing postwar prob- and New Deal views thereon, into pen. One report is concerned with question of conversion from war to e, the other with measures of federal —"public-aid" is the board's term— sure jobs and security "for all our le wherever they may reside." Both rts touch frequently on postwar engineering and construction, pri- as well as public.

riefly reviewed, report No. 1 presents mmendations on three subjects: (1) obilization of men, war plants and time economic controls; (2) plans services and security; and (3) plans action by state and local govern- ts and regions. Report No. 2, con- ing of three chapters from the thirty pter report of the NRPB Committee Long Range Work and Relief Poli- , carries recommendations for assur- jobs for everyone through public-aid grams.

Demobilization considerations

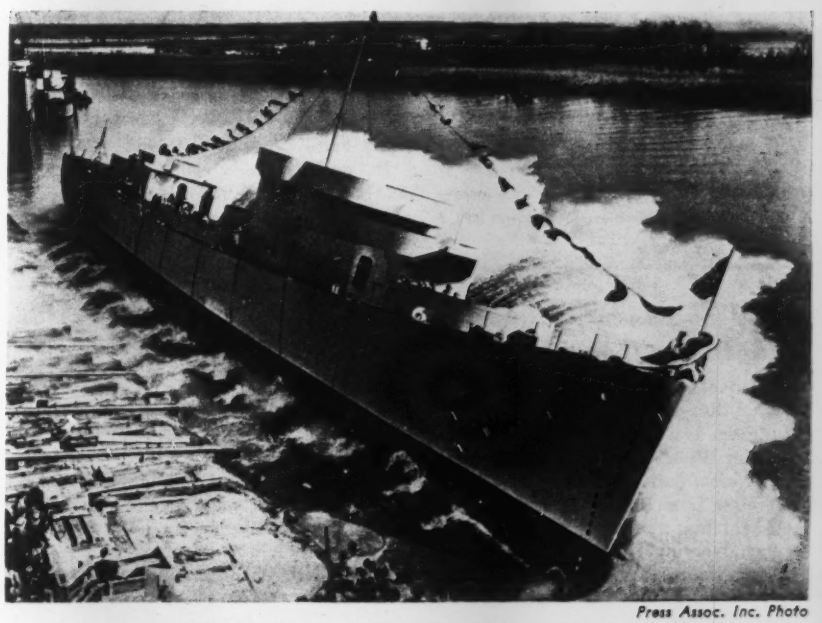
n so far as the first report is con- ned, its recommendations affect civil gineers and construction men both ectly and by implication. Thus, de- bilization of men from the armed ces and from war industries, which board urges be as carefully planned their recruitment, may require pro- ding them with work on public- rks projects, if private industry does supply sufficient job opportunities. gain, in demobilization of war plants, ere is the recommendation of a more irable regional distribution of manu- facturing, by retaining in operation selected government-owned plants, a result of which might be considerable revamping of city facilities. Under demobilization of war plants, the board also recommends provision for plant rehabilitation grants and loans to be used for conversion to peacetime production. Finally, a recommendation for the establishment of new forms of joint private and governmental partnerships is particularly significant. Pointing out that government is already taking a considerable part in the management of many war industries, the report suggests the desirability of continuing this government control and specifically mentions the aluminum, magnesium, shipbuilding and aircraft industries.

Rationing to continue

Under demobilization of wartime economic controls, the board suggests that it may be necessary to continue, for sometime after the war ends, the rationing of durable consumer goods and the use of price controls, at least for those commodities in which the potential demand greatly exceeds the available supply. The report also emphasizes the "desirability of continued federal control of industries based on scarce raw materials or those with rapidly diminishing reserves" as well as those supplying power, fuels and transportation.

Commenting on the place of public works in a postwar plan, the board states that "the main reliance for an effective consumer demand must come

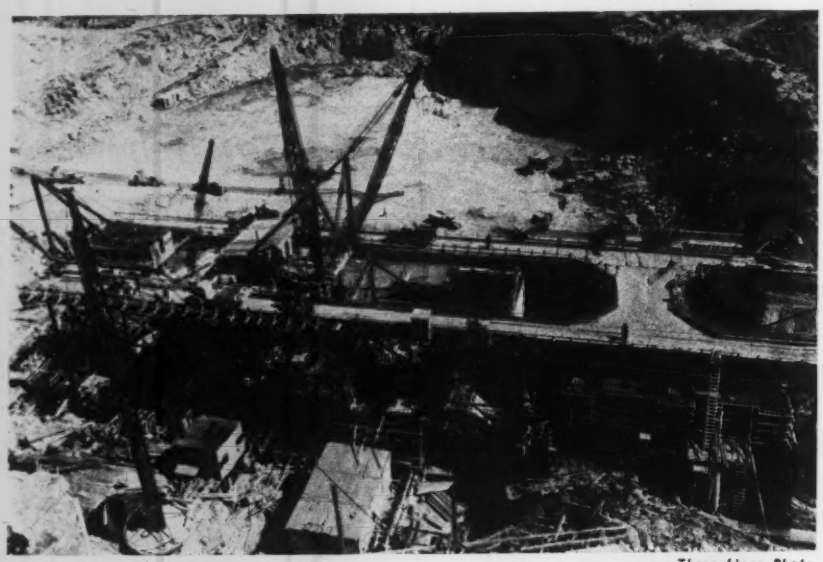
(*Continued on p. 9*)



Press Assoc. Inc. Photo

New type of Navy escort craft

Here is a foretaste of more grief for the U-boats and more protection for our merchant marine and our overseas shipments of men and materials of war. Splashing into the water at Orange, Tex., is one of the new type of Navy convoy escort boats announced by Secretary of the Navy Knox on March 5. This ship, of 1,300 tons, 300 ft. long, and of 35-ft. beam, is not as large as a destroyer but is larger and more powerful than a corvette.



Three Lions Photo

Early work on the great Shipshaw power plant

Just released for publication, the above picture shows the stage of work on the one-million horsepower Shipshaw power plant in Quebec as it appeared last July, six months before the first units of the plant went into service.

Construction of the second stage of the Shipshaw development on the Saguenay River in Quebec has been carried forward in record time to increase Canada's power supply for the production of aluminum. Until the first units actually were in service (ENR Feb. 4, p. 158) all news of the work was strictly controlled by the censors, hence little has been revealed as to how the work was accomplished in fast time in the face of the severe climate of northeastern Quebec where winter temperatures frequently go to 50 below zero.

The present work is the second stage of a project to develop 205 ft. of head on the Saguenay River. The first stage (ENR Dec. 5, 1929, p. 899) consisted of a high dam across the river at Chute a Caron and a power plant developing 151 ft. of head. The current work includes construction of an artificial channel from Chute a Caron Dam to a point farther downstream where the full head can be developed in a single power station of 1,020,000 hp. That channel was formed by damming side valleys and cutting through ridges.

Work on the current project began in October, 1941. The picture shows the substructure for the first section of the powerhouse as it appeared in July of last year, looking down from the bluff above the plant. Also shown is part of the tailrace excavation. In all, 44 power shovels and cranes and 525 trucks and tractors were used for moving earth and rock on the project.

Worthy of special note is the unusual construction bridge that was used in building the power house substructure.

The project is being built by the Aluminum Company of Canada, the Foundation Company of Canada being the general contractors.

Navy engineer program adopted at Columbia

The School of Engineering of Columbia University has adopted the Navy's training program as a substitute for its normal courses for the training of civil, mechanical and electrical engineers, according to Associate Dean James K. Finch. Dean Finch said that the Navy requires such broad engineering training for engineer-officer candidates as to result in the university giving to the Navy men sent to it for training a course that closely parallels the normal offering in these subjects. To avoid duplication, the School of Engineering will thus adopt for the duration the Navy program requiring all students in these three fields to take the course of training laid down by the Navy. Students in other branches such as mining, metallurgical, chemical and industrial engineering will continue to follow their normal progress.

The change will go into effect about June 1.

A.S.T.M. meeting features powder metallurgy, pain

Committee Week, an annual event of the American Society for Testing Materials, involving the meetings of numerous standing committees as well as a general program, was held March 1 to 4 in Buffalo, N. Y. Symposiums on powder metallurgy and on paint featured the general sessions, and about a dozen committees held meetings.

Out of the committee meetings came recommendations by Committee C-1 on Cement to advance the test for autoclave expansion of portland cement (C 151-42) from tentative to standard status, and to retain the method of test for compressive strength of portland cement mortars (C 109-37T) on a tentative basis. The committee was advised that the War Production Board is interested in converting to critical material manufacture any cement-making facilities that are idle. Committee D-1 on paint reported pronounced activity in research work on traffic paints and on accelerated tests for protective coatings.

A half-dozen authoritative papers were presented on powder metallurgy, the new science of compressing metal powders into machine parts, as an alternative to casting or producing them by other methods of fabrication.

Charles Hardy, president, Hardy Metallurgical Co., pointed out that most of the powders used are the product of reduction of metal salts by gases, electrolysis or atomization. Purity, generally about 99 percent, is an important requirement, as is compressibility. Powders are now produced in angular, globular, acicular, nodular and other shapes, said Dr. Hardy, who demonstrated a large number of powder metallurgy products such as gears, screens, filters, radio parts, etc.

Information on pressures was given by C. W. Balke, director, research division, Fansteel Metallurgical Corp. An iron powder, for example, sintered at 1,100 deg. C. for one hour, had a density range from 4.19 with a pressure of 5 tons psi. to 7.66 with a 160-ton pressure. At this top pressure, one of the powders with a tensile strength, compressed, of 9,500 psi. developed a tensile strength on sintering at 1,400 deg. C. for one hour of 41,600 psi.; and an elongation in 2 in. of 30.5 percent after sintering at 1,100 C.

The paint papers were devoted principally to problems of substitute materials and of camouflage.

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New chief engineer for Minnesota roads

Orin L. Kipp, of St. Paul, has been appointed assistant commissioner and chief engineer, of the Minnesota Highway Department, to succeed the late J. T. Allison. M. J. Hoffman, Minnesota commissioner of highways, also announced the appointment of Gordon G. Gladman, of St. Paul, as engineer of plans and surveys.

Mr. Kipp has been connected with the Minnesota highway department since 1914. He was appointed first as engineer for the state in Redwood County, Minn., and in the fall of 1916 was transferred to the Central office and placed in charge of federal aid construction which was initiated at that time under the Federal aid highway act. In 1921 he was appointed as construction engineer, when the trunk highway system was established. On July 1, 1939, Mr. Kipp was appointed assistant chief engineer and planning engineer.

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Essential construction approved by WPB

Construction projects totaling $1,066,990,976 in essential wartime construction projects have been approved by the War Production Board since Oct. 22. This figure represents those projects coming under the scrutiny of the Facility Clearance Board and the Facility Review Committee. These bodies were organized to pass upon construction projects coming within the $500,000-$1,000,000 limits as to their essentiality to the war effort.

Projects estimated at $82,137,313 have been disapproved since Oct. 23, and stop orders issued on projects already under way amount to $1,306,352,395. Included in this total are projects costing $2,296,648 that were ordered stopped during the week ended Feb. 26. Other facility or construction projects are currently being reviewed and further curtailment is expected.

Why We Recovered from Pearl Harbor

When honorary membership in the American Society of Civil Engineers was conferred on Rear Admiral Ben Moreell, chief of the Navy's Bureau of Yards and Docks, at the recent annual meeting, Rear Admiral Frederic R. Harris (retired), himself a former chief of the bureau, was asked to present Admiral Moreell to the audience. Not only did Admiral Harris accord an inspiring and well-deserved tribute to one of the nation's outstanding engineer war leaders, but he revealed new information on the aftermath of Pearl Harbor that will be gratifying to engineers and construction men everywhere. Admiral Harris' remarks and Admiral Moreell's response follow:

Rear Admiral Harris—Five years ago the President of the United States broke a precedent and picked a young, vigorous, energetic man for Chief of the Bureau of Yards and Docks, one of the great Navy bureaus. In doing so he made one of his most discerning and wisest selections. When this officer entered his new duties his first work was to survey the docking, repair and base facilities in the Atlantic and the Pacific. He found conditions in the Pacific far below the standard expected. He found the slogan accepted by the American public, that Hawaii was the Gibraltar of the Pacific, at best a euphonious phrase. He immediately undertook, against opposition and on his own initiative, to correct these conditions, paying especial attention to the Pacific and Hawaii.

At Pearl Harbor, our Naval base, there was one drydock built and completed about the end of the last war. It was too shallow to dock our modern battleships, and too shallow to dock any battleship over draft when damaged in battle. Conscious of the fact that the ships that count are those that can stay in the line and fight, and that to do this repair docks and facilities and other bases are necessary, close to the probable line of action, he immediately proceeded with the construction of two graving docks at Pearl Harbor, and took steps to see that a floating dock, inactive at New Orleans, was transferred to that base.

In September, 1941, at his request, accompanied by Captain J. J. Manning of the Navy, under his orders, I went to the Hawaiian Islands. Our mission was, under his instructions, to do everything possible to expedite the completion of that work so that the large dock there might be ready as an emergency measure to receive battleships.

Captain Manning's mission was to go to the base work at Midway, Wake, Palmyra, and expedite that work as much as possible. A few months later, Dec. 7, Japan struck. That was probably one of the outstanding Naval calamities of the world. Of the fleet there, besides other ships, eight battleships, the backbone of that fleet, were either sunk or damaged and placed out of action. On Dec. 8, the very next day, that new drydock was in use, and a few days later the New Orleans steel dock was also in use.

If it had not been for the foresight of this member of your society, the blow that Japan struck in the Pacific would have been irretrievable. Those battleships could not have been put in condition during this war period if it had not been for his foresight, alertness, vigor and energy. We would have lost command of the Pacific and perhaps faced a war of a generation of blood and tears, with even the possibility of loss of the Hawaiian Islands and a threat to our whole Pacific Coast.

His work at Wake made possible the defense there by the Marines. His work at Midway and other islands made possible their successful defense. What he did made possible the victories at Midway, the Coral Sea and the Solomon Islands. Mindful of what occurred at Wake, Guam and Cavite, he organized a military construction corps, the famous Seabees, of which there are nearly 200,000 doing marvelous work in the battle areas.

In honoring him the society honors itself.

Rear Admiral Moreell—I accept this great distinction with a deep sense of humility and a profound realization of the obligations which it imposes upon me. We are engaged in a war of extermination. It is one of the utmost encouragement that this great Society has seen fit to honor two members of the Armed Forces, my colleague, unfortunately absent, General Somervell, and myself. We will carry on.

I think the ladies would like to know, and perhaps the men too, that whenever I receive a great honor such as this I say a prayer of thanks to my sainted mother, now dead.

Fig. 1. After compaction of the foundation soil with sheepsfoot rollers, the 8-in. stone sub-base was constructed in two equal layers 20-ft. lanes between 2x4-in. forms. Using a tractor to pull both the spreader box and truck at slow speed permitted even distribution of the sto

Airfield Paved with Local Materials

Now nearing completion by the U. S. Engineers in Kentucky is a small CAA airfield that was built rapidly and at low cost because local materials could be used for nearly all of the work. The field is located in a region where limestone quarries are plentiful and where Kentucky rock asphalt may be obtained but a few miles away. The airport wi provide four 150-ft. wide runways ea 3,900 ft. long, but under present pla only two runways are being paved. Thes runways are surfaced with a bituminou pavement that requires an 8-in. wate bound macadam sub-base, a 1½-i binder course, and ½-in. asphalt wea ing surface.

Fig. 2. The 1½-in. binder course was laid at a temperature of 270 deg. F. by a black-top paver capable of placing 500 tons of material in a 12-hr. day.

Subgrade compacted by rolling

Before paving of the runways started the foundation soil, which is a dens red clay, was compacted with sheeps foot rollers until it had a density o 120 lb. per cu.ft. Over this at the rat of 50 lb. per sq.yd. was added a ⅜-i blanket of limestone screenings varyin in size from particles of ⅜-in. dia. t those retained on a No. 200 screen. Thi material was distributed by two spreade boxes drawn by trucks, and compacted by a 10-ton tandem smooth roller.

Sub-base built in two courses

Construction of the 8-in. water-bound macadam in 20-ft. wide lanes followed immediately with stone varying in size from 1½ to 4 in. It was built in two 4-in. layers with stone obtained from nearby limestone quarries and spread with the boxes shown in Fig. 1. It should be noted that the box is pulled by a tractor some distance ahead. This hitch permitted forward advancement at a much more constant rate than if

uck had been used to pull the box. the hitch illustrated, the truck also ulled by the tractor. A rate of e of 18 ft. per min. gave a uni- layer of stone and was used for of the work.

Sealed with screenings

top of each course a layer of ings of ⅜-in. maximum diameter ith 15 percent passing a No. 100 was added. Sufficient screenings applied to fill all cavities on the e and they were compacted with on, three-wheel, smooth roller. The screenings were swept into wind- with push brooms and loaded into by hand for removal. Next, water dded with pressure distributors or s until the course was saturated, was indicated by a thin layer urry moving along in front of the as the compaction work contin- The second 4-in. course was con- ted in much the same way and the pleted 8-in. base was primed with tar by one pass of a pressure tank. tar was applied at the rate of 0.35 per sq. yd.

Plant-mix binder course

er the tar prime was added a 1½-in. er course of plant-mix material pre- d by a pug mill of 2,500 tons daily city set up near the job. The stone isted of crushed limestone all smaller 1-in. dia. with 3 to 8 percent pass- a No. 100 screen. Asphalt of 120 to penetration was added to the stone at the rate of 10 gal. per ton of rock. The mix was applied at a temperature of 270 deg. F. and at a rate of 500 tons per 12-hour day through a 10-ft. wide black-top paver. After compaction, which was accomplished with the 10-ton, three-wheel, smooth rollers, an RC2 tack coat was added at the rate of 0.10 gal. per sq.yd. and at a temperature of 150 deg. F. by a single pass of a pressure distributor.

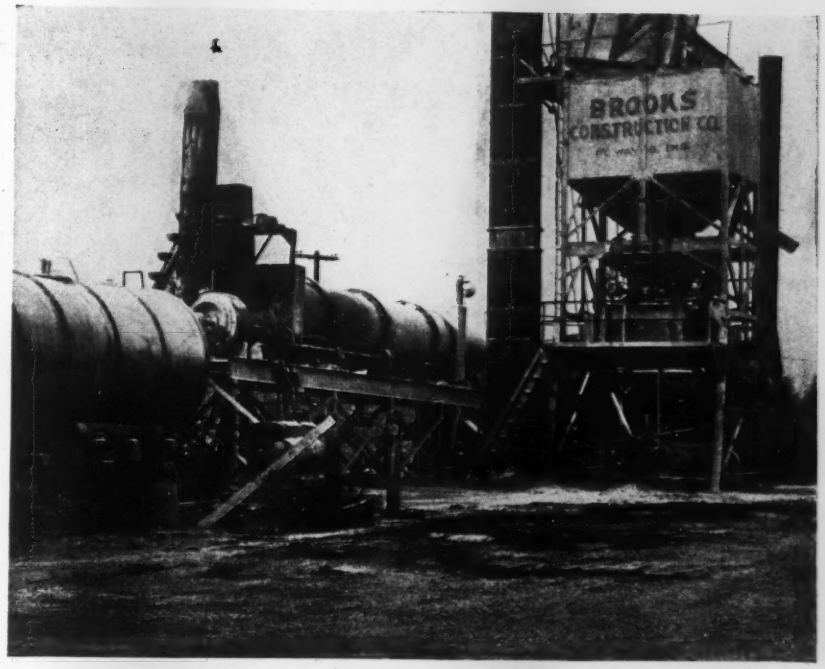

Fig. 3. Binder material was prepared in this pug mill set up near job. This plant had a capacity of 2,500 tons a day.

Addition of a ½-in. thick wearing course of natural rock asphalt obtained at a nearby quarry followed within a few days. This stone, which had a 7.6 percent bitumen content, was stored in stock piles over perforated pipes and brought to a temperature of 180 to 190 deg. F. with dry or superheated steam. It was delivered to the paver by trucks at a rate of about 300 tons per 12-hr. day and spread in 10-ft. wide layers at a temperature of about 175 deg. F. The rock asphalt had a moisture content of 1½ to 2 percent when laid, and it was compacted by the three-wheel rollers previously mentioned. The finished runways, which have a 9-in. crown in the 150 ft. width, are considered excellent.

. 4. Over each course of the sub-base, screenings were added, rolled, and broomed to fill openings near the surface. Then water was applied by pressure trucks until rolling showed sub-base to be saturated.

Low total cost

In all 140,000 sq.yd. of pavement were constructed and the cost for both grading and paving the field was $400,000. Although the paving costs were not kept separate, it is estimated that the work cost $1.70 per sq.yd., for both materials and labor.

The field is being constructed by the Louisville District, U. S. Engineers office, where Col. Henry F. Hannis recently replaced Col. Henry Hutchings, Jr., as district engineer. On the job Donn L. Wright is resident engineer. The general contractor is the Brooks Construction Co., Ft. Wayne, Ind., with Benjamin F. Lothrop superintendent.

Construction Communiques

Engineering News from the Battlefronts

Guadalcanal—News that the Seabees were on Guadalcanal and praise for their work there have previously come from Secretary Knox and Undersecretary Forrestal of the Navy Department after their Pacific inspection trips. Now comes the acme of appreciation for their work, because it originates with the Marine Corps commander in this historic landing action, Maj. Gen. A. A. Vandegrift. Writing to Rear Admiral Ben Moreell (CEC) USN. Chief, Bureau of Yards and Docks, General Vandegrift says:

"I wish to express at this time my appreciation for the work done by the Sixth Naval Construction Battalion at Guadalcanal. They were a splendid body of workmen who approached and successfully performed an unusual variety of tasks. Each of those tasks was intimately connected with the preparation of and maintenance of Guadalcanal as a base. The members of the Battalion, with courage and willingness, undertook construction work of all types; and when the demand arose, they cheerfully turned to other tasks where hands were needed. During one period the pressure of enemy forces against us was so great that troops could not be spared to handle stores on the beaches. Fighting had to go on, and ships had to be unloaded. Construction workers voluntarily took over that work, and performed it exceedingly well.

"In addition to commenting upon the performance of duty by the Seabees, I wish to commend the wisdom that foresaw the need for such an organization. In the war in the Pacific, in seizing one base after another, few of us realized the great amount of construction that would be necessary. Need for this arises almost immediately after the initial landing, and becomes greater as the area seized is developed into a real base. I do not know how we would have gotten along without the Seabees, and trust that they will be participants in every future operation in even larger numbers."

To encourage postwar planning by states

The Ways and Means Committee of the House of Representatives is considering a bill, introduced by Representative Rivers, Feb. 23, to provide for issuing a special series of War Savings Bonds to states and their local subdivisions through which they may accumulate financial reserves for postwar construction. If held to maturity at the end of the war the bonds would yield 4 per cent; if sold previous to that time only a 3 per cent yield would result. According to the bill, authority to issue the bonds would remain in force for a period not to exceed six months after the termination of the present war.

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Request filed for second Texas-East coast pipeline

Application for a second pipeline from the midwest to the east coast has been formally filed with the War Production Board by Petroleum Administrator Ickes. If approved, this would provide two more or less parallel pipelines from Texas to the East Coast—a 24-in. crude oil line and a 20-in. line for refined products. The Texas-Illinois leg of the crude line is now substantially complete, and the eastern leg is under construction.

The 836-mile section of the products line from Texas to Norris City, Ill. and Seymour, Ind. was approved in January, but construction has been held up by contentions of mid-western oil refiners that the eastern leg ought to be built first. Intention, however, is to go ahead with the western leg first. Orders have been placed for all the pipe, and negotiations are nearly complete for pumps, valves, and other accessories; completion is expected by September 1.

Contractors are presen... Army-Navy "E" award

Rear Admiral Jes... Oldendorf, ... mander in chief of the naval oper... base at Trinidad, presented the A... Navy "E" pennant recently to the J... Stewart Co. and Associates, build... the American base at Trinidad.

The West Construction Co. of Bo... Mass., has received the Army-Navy ... production award for outstanding ... formance in constructing the A... railroad cut-off from Portage Junct... Whittier, performed under juris-di... of the Seattle district of the U. S. ... engineers. The award was presented ... Colonel Benjamin B. Talley, engi... officer in charge of construction ... Alaska, and accepted by Harry Carl... president of the construction comp... The project, which consisted of ne... four miles of tunnel driving and ... than 12 miles of railroad grading, ... completed 2½ months ahead of sche... despite labor, transportation and wea... difficulties, and hazardous terrain.

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AWWA shaping plans for June conference

Because water supply is an in... essential to the war effort, and cur... problems are such as to indicate str... need for consultation, the Ameri... Water Works Association has made ... changes in its plan to hold an ann... conference in Cleveland, Ohio, on J... 16-18, according to Harry E. Jord... secretary.

Wide World Ph...

Metal priorities don't bother Seabees

Empty gasoline and oil drums provided the raw materials for this construction job by two members of a U. S. Navy Construction Battalion in the South Pacific. The tile-like roof of this blacksmith shop is made up of sheets of metal obtained by knocking out the ends of the drums and partially flattening out the surfa... with a road roller. Most of the Seabees w... engineers and technical experts in civilian l... Recently the organization was commended ... the Secretary of the Navy for building an a... field in 17 days.

nitation priorities ction recommended

ommendations for the establish- of a sewerage and sanitation sec- ithin the Division of Governmental irements of the War Porduction which would act on all priority rs relating to new construction and enance, have been submitted to Maverick, director of the govern- l division.

rther action is expected soon on the mendations, which were made by a ittee acting on the invitation of Maverick. The committee consisted nn H. Enslow, chairman, representa- of the American Society of Civil neers; George J. Schroepfer, rep- ting the Federation of Sewage s Associations, and William Raisch, senting the American Society of hanical Engineers.

e function of the proposed new sec- would be to clear all matters relating werage and sanitation, to determine essentiality of projects, and to make mmendations to the director of the rnmental division as to their ap- al or rejection. It was suggested by committee that the section be ad- stered by someone of proven admin- tive ability and who is nationally gnized in the field of sewerage and ge treatment practice.

ssatisfaction with the existing sys- in the Division of Governmental uirements for handling priorities re- g to sanitation work was expressed January in resolutions passed by American Society of Civil Engineers the Federation of Sewage Works ciations.

is expected that Mr. Maverick will ne further details of the proposed section at the meeting of the New ey Sewage Works Association, to be in Trenton on March 25.

• • •

ccess roads scheduled o raw materials sources

o satisfy the need of America's war stries for raw materials, more than 0 miles of access roads to mines, rries, and forests have been scheduled construction, Commissioner Thomas MacDonald, of the Public Roads Ad- istration of the Federal Works ncy, has announced. By March 1 of year roads of this type costing about 000,000 had been approved for con- ction. A hundred miles of such roads e completed in 1942 at a cost of 6,000.

Of these access roads to sources of raw terials, which are exclusive of the ess roads to military establishments d industrial plants, state highway de- partments are in charge of the actual construction of about 30; U. S. Forest Service about 90; U. S. Office of Indian Affairs 6; U. S. Grazing Service 55; and the Public Roads Administration about 15. Individual projects range in length from less than one mile to as much as 170 miles.

By states, the mileage and construction costs of these access roads are as follows:

State	Miles	Cost
Alabama	6	$130,000
Arizona	144	265,600
Arkansas	7	224,500
California	550	1,446,895
Colorado	399	882,239
Idaho	371	1,426,830
Kentucky	3	22,000
Maine	5	16,700
Minnesota	164	39,300
Montana	187	980,475
Nevada	260	1,095,164
New Mexico	134	550,060
New York	1	39,300
North Carolina	11	29,000
Oregon	223	790,275
Tennessee	22	67,500
Texas	15	55,000
Utah	493	563,050
Vermont	12	94,699
Washington	88	547,059
West Virginia	8	17,500
Wyoming	27	43,297

Ammunition igloo follows wood pipe design

The wood drainage pipe developed by the American Rolling Mill Co. to serve in place of its corrugated iron product during the war emergency has proved so successful that a similar design has been worked out for ammunition igloos. The same type of doweled and interlocking joint that has given the pipe rigidity and strength is used in the igloos. In section, a half of a sixteen-sided polygon, the igloos have a diameter of 26 ft. As shown in the illustration, they are erected on a concrete base, and waterproofed with impregnated building paper. As a final operation, the igloo is buried under a backfill of earth.

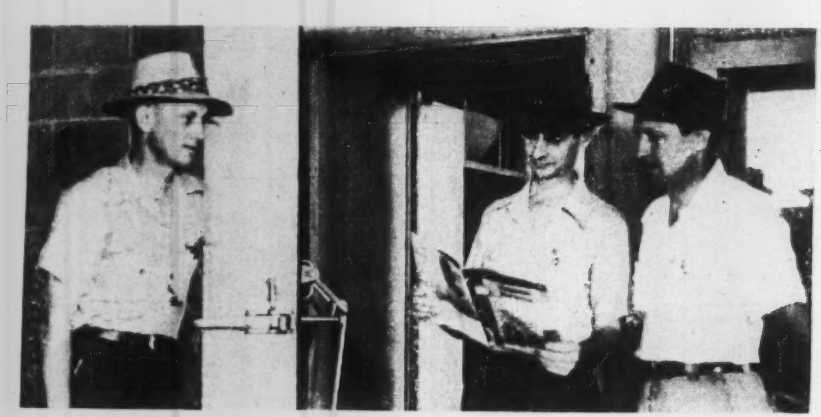
Money for E-award party goes to Navy charities

Employees of the McLean Contracting Co., Baltimore, Md., set a patriotic precedent on March 10 when they gave up the celebration party, which usually accompanies receipt of an Army-Navy E Award, in favor of contributing the $5,000 involved to the Navy Relief Society and the Women's Defense Auxiliary. Rear Admiral Manley Simons, commandant of the Fifth Naval District, in accepting the contribution, congratulated the employees, and expressed the hope that their action would be a precedent that would be followed by others.

The E was awarded "for outstanding performance in constructing more than one hundred heavy engineering and marine projects in the Hampton Roads area". In presenting the E to Oscar B. Coblentz, president of McLean, who represented the contractors, engineers, subcontractors and all employees, Rear Admiral Gaylord Church (CEC) USN, recalled that in the last war he had been in charge of construction of the Naval Mine Depot at Yorktown, also a McLean job. "I realized then what a fine construction company you were and what excellent work you did", he said, expressing pleasure at being able to reward similar excellence twenty-five years later.

MEN AT WORK

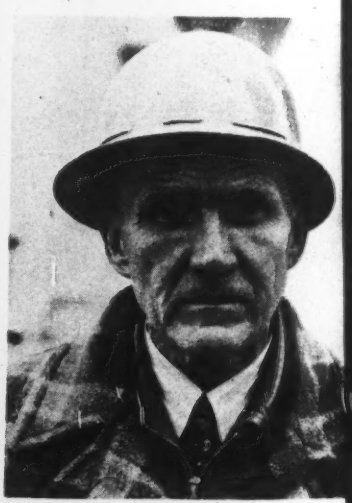
Research on cement and concrete carried on by the Portland Cement Assn. is by no means confined to its Chicago laboratory where a large staff works under the supervision of F. R. McMILLAN, director of research. A series of long-time studies of concrete on which field work is under way in many parts of the country necessitates extensive travel by Mr. McMillan, here shown making notes at San Vicente Dam, San Diego's new addition to its water supply system. On the left is CHARLES P. WILLIAMS, resident engineer for the city and (right) PAUL BEERMANN, engineer, Division of Development and Conservation, San Diego Water Department.



On construction of an unusual building at Ft. Knox in Kentucky, the three engineers above played an important part. Left to right they are: J. W. GREGG, inspector for the U. S. Engineers; H. W. METCALF, office engineer for the same organization; and STEVE ERTL, JR., superintendent for Blauner Construction Co., Chicago, the general contractor.

Wyoming Engineering Society's new president ELLIS HUDMAN (left), Rock Springs, and KIRBY H. OLDS, (center) Secretary-Treasurer, Cheyenne, meet with retiring president EARL LLOYD, (right) to get some pointers on plans for the coming year.

CAPTAIN EDWARD ELLSBERG, Navy s vage engineer, is in charge of salvaging ships scuttled in the harbor of Massua, Eri by Italians before the British took over.



ROBERT C. PERKINS has served as Assist Construction Superintendent at Douglas D of the Tennessee Valley Authority for the p several months during the rush work t brought this job to closure in 13 mont Perkins was construction superintendent South Holston project until it was curtail last fall, and was superintendent at Nott Dam, both for TVA.

RPB reports on postwar ed to prod Congress

(Continued from p. 1)

private activities taking the lead pening of new enterprises and in our new productive capacity. The is under no illusion that the con- tion industry which now, with pub- nd private activity combined, is at eak of 11-14 billions can control tional income of 110 billions."

Public improvement programs

expanding its views on cooperation vernment and private enterprise, the d recommends an adequate program ublic improvement projects and an nsion of public-welfare expenditures. cooperation with private enterprise government, says the board, should the authority to clear away obsoles- plants of various kinds through demnation proceedings, and should have authority to assemble prop- s for reorganization and redevelop- t along the lines of previous grants he power of eminent domain to canal railroad companies for the acquisi- of rights-of-way.

he board recommends that metropoli- regions and cities make plans now for r whole urban areas, federal and state ncies to provide technical assistance grants-in-aid. It suggests the estab- ment of agencies and authorities hav- power to act, regardless of existing itrary boundary lines, on such prob- ns as public land assembly, taxation, nsportation terminal coordination, mination of blighted residential, com- rcial and industrial areas, and con- uction of buildings and facilities to ure adequate housing and working nditions. A further suggestion is that s type of work might be done by a oup of metropolitan subsidiaries of a deral development corporation working concert with the local governments.

A national transportation agency is o recommended to coordinate all fed- al development in that field, and take blic responsibility for (a) terminal construction, (b) federal credit for the ovision of new facilities, (c) consoli- tion of the railroads into a limited mber of regional systems, (d) develop- ent of highways, with major emphasis express highways and off-street park- g in urban areas, and (e) for the de- lopment of an expanded and integrated stem of airports and airways designed r both passenger and freight service.

The board also recommends that au- hority be granted federal and state gov- rnments to acquire and finance adequate ights-of-way for highways that can be uilt immediately after the war, that river nd harbor development should be in- reased, and that an enlargement and ntegration of the network of major pipe- lines be undertaken. Additional coor- dinated public and private development of water power from publicly-owned plants such as Columbia River, Boulder Dam and TVA through regional agencies is also urged as is continuing federal assistance for comprehensive multi-pur- pose development and control of water resources including pollution control of rivers, and irrigation.

To implement such planning, the board recommends that adequate author- ity and funds should be made available now by federal, state and local govern- ments, and that programs to be planned now should be of such a character that they will not only facilitate but carefully avoid hindering postwar industrial con- version to peacetime production.

In order to provide a shelf of public construction projects of tested value, the board recommends: (a) Continued and invigorated efforts to secure the prepara- tion of 6-year programs or capital budgets by federal agencies, state governments, local governments and other agencies, public and private; (b) listing of proj- ects classified according to size, type and locations of skilled and unskilled labor involved, materials needed and time re- quired for construction; (c) immediate inauguration of surveys, investigations and preparation of engineering plans and specifications through allocation of aid to federal and non-federal agencies from a fund to be administered by the President and reimbursed as a part of the cost of construction of the project.

Social security

Under its "Plans for Services and Se- curity" the board is principally concerned with education and health measures. It urges federal appropriations to aid states and localities in developing a system of

(Continued on p. 13)

Planning board report may represent fourth term campaign platform of 1944

Controlled demobilization of war plants seen displacing public works as principal element in New Deal program

Special Washington Correspondence

The two reports of the National Re- sources Planning Board which the Pres- ident sent to Congress last week should be read as the outline of a campaign platform for the elections of November, 1944—as the platform on which Roose- velt or another New Dealer will prob- ably run for the Presidency. This is the opinion of political observers in Wash- ington.

These same sources believe it would be misleading to read the reports on postwar planning and on social security as any guide to immediate governmental action. With the possible exception of certain tax proposals to permit the ac- cumulation of reserves for postwar re- conversion of war plants, there is hardly anything in the report which the pres- ent Congress is likely to do anything about. Initial reactions of Congressmen made that plain. Also, lack of action was practically guaranteed when the re- ports were referred to Senator George's committee on postwar planning—a com- mittee thoroughly unsympathetic to New Deal aims.

Not every NRPB report can be taken as an authentic expression of official administration plans. This one can. It went over to the White House months ago. And there it lay, while the worried Planning Board began to believe its brainchild would never see the light of day. What had happened was that the President's political advisors had realized the report presented them with a plat- form for a fourth term, and they were holding it until the time seemed ripe to begin fourth term talk.

Essence of the platform is use of the immense plant facilities now owned out- right by the Defense Plant Corporation to keep the national economy running at a high enough level to guarantee full employment and a national income in the neighborhood of 110 billions.

The basis of the NRPB plan is to turn over these plants to industry at very favorable terms—but subject to condi- tions as to what shall be manufactured and subject to guarantees of rapid con- version to peacetime production together with maintenance of certain minimum levels of production and employment.

For construction, there are two im- portant things about the report. The reiteration of previous recommendations for a big public works program—appar- ently intended to run to something like 10-14 billions a year—makes plain that this is still an integral part of New Deal thinking.

Secondly, the report brings forward a new approach to the full employment problem, use of the government's pres- ent war-born proprietorship of a large segment of industry to enforce full em- ployment. This means that the New Deal- ers no longer intend to rely primarily on the construction industry to solve the problems of society—which may turn out to be something of a relief to the construction industry.

MEN AND JOBS

W. H. Yeager has been appointed county road engineer of Thurston County at Olympia, Wash., succeeding Clarence Shain, who resigned to accept a post as plans and training officer of the Washington State Guard. Mr. Yeager has been with the Washington State Highway Department for the last 18 years.

Sidney L. Stolte, administrator for WPA in Minnesota, and formerly chief engineer on state projects, has resigned. He will become associated with P. C. Bettenburg & Co., architects and engineers of St. Paul.

Aubrey Edmondson, former civilian employee of the Vicksburg, Miss. Engineering District, has been named area engineer in charge of the Greenwood, Miss., area, succeeding Maj. W. R. Harrison who has been ordered to duty.

Harry G. McElwee of Paducah, Ky., has been named city manager of that city, succeeding James P. Smith.

George T. McCoy has been appointed California state highway engineer effective Jan. 4, after serving ten years as assistant state highway engineer.

John F. Swensen, Sr., who has been division engineer of the Pennsylvania Railroad at Logansport, Ind., has been transferred to the Chicago office of the company.

William E. Baker has tendered his resignation as director of public relations for the North Carolina Highway and Public Works Commission in order to enter other work.

W. C. Olsen, Raleigh, N. C., consulting engineer, is supervising the construction of additional sewerage facilities to serve a Federal housing development under construction at Goldsboro, N. C.

W. J. Highsmith, Jr., of Plymouth, N. C., district health department sanitary engineer, has been commissioned an ensign in the United States Naval Reserve.

C. F. Seifried has been named superintendent of the Wyoming Highway Commission, succeeding Frank Kelso who recently resigned. Mr. Seifried will continue also as chief engineer.

R. L. Rothe, resident engineer for the Texas Highway Department at Corrigan, Texas, is now on active duty with the Navy and is in training in Virginia.

Wendell M. Smock, former architect, engineer, builder and contractor, of Louisville, Ky., is now in Eritrea, where he is engaged in government construction work.

Robert Alexander Harris, chief engineer for the Mississippi State Highway Department since 1934, has been commissioned a lieutenant-commander in the United States Navy Reserve. Chief Engineer Harris, who has been with the highway department for 23 years, has been granted leave of absence for the duration and in his absence his work will be carried on by other members of the engineering staff.

Aimé Cousineau has been appointed director of the City Planning Department of Montreal, replacing H. A. Terreault, who died recently. Mr. Cousineau is a graduate of the Ecole Polytechnique of Montreal, 1910, of Massachusetts Institute of Technology, 1912, and Harvard University. He has been active for a number of years in city planning work in Montreal.

R. A. Harris, chief engineer of the Mississippi State Highway Commission, has been commissioned lieutenant commander in the Navy and will report for training at Williamsburg, Va. He has been with the commission 23 years.

Lieut. (jg) A. W. Martin and **Lieut. (jg) R. H. Cook** of the United States Navy have been assigned to duty at the Marine Air Base at Cherry Point, N. C., as assistants to the public works officer.

Walter Fleming, Columbus, Ohio, assistant engineer of the Bureau of Bridges of the Ohio Highway Department for the last four years, has accepted a commission as lieutenant in the Navy. He will be stationed at the Navy construction training center at Williamsburg, Va. Lieutenant Fleming has been employed in the highway department 20 years.

F. M. Davis, assistant district engineer for the Texas Highway Department at Paris, Texas, has resigned and is now on active duty with the Navy in training at Norfolk, Va.

Clifton Rice, district engineer for the Texas Highway Department at El Paso, has been granted a leave of absence due to illness. During his absence, G. G. Edwards, manager of the Highway Planning Survey, will serve as acting district engineer.

C. W. Anderson of St. Paul and [illegible] shall, Minn., has been named [illegible] FWA director for Region 6, with [illegible] quarters in St. Paul. He succeeds [illegible] B. Curry, acting director since [illegible] September, who resigned to become [illegible] sociated with the Northwest Airlines.

Royden R. Brockway, of Minneap[illegible] has been appointed bridge engineer [illegible] the Northern Pacific Railway Co., [illegible] headquarters at St. Paul. He succe[illegible] M. W. Beach, who recently retired [illegible] 30 years of service.

Col. W. J. Matteson, district engi[illegible] of the Army Engineering District [illegible] Rock Island, Ill., has been ordered [illegible] duty at Fort Belvoir, Va. He came [illegible] the Rock Island district in 1939 a[illegible] two years in Hawaii.

Thomas Fowler, associate regional e[illegible] neer for the Federal Works Agency, [illegible] Regional District, St. Paul, Minn., [illegible] resigned to enter service with the Na[illegible] He will be a civil engineer with [illegible] of lieutenant commander.

C. H. Storms, city engineer at Lau[illegible] Mont., has resigned to undertake w[illegible] with a construction engineering f[illegible] at Edmonton, Alta. The firm is engag[illegible] in laying an oil pipeline in the area.

James Deneen, engineer on the ordna[illegible] plant waterworks at Rosemount, Min[illegible] and formerly of St. Paul, has been nam[illegible] city engineer of Crookston, Minn. H[illegible] succeeds the late J. E. Dishington.

Capt. O. C. Helseth, of Minneapolis, a[illegible] engineer at Fort William Henry Har[illegible] son, under construction near Helen[illegible] Mont., has been transferred to Kans[illegible] City, Mo., for temporary duty. Lat[illegible] he will take over duty as area engine[illegible] on the Great Bend airfield in Kansa[illegible]

H. A. Whittaker, of Minneapolis, direc[illegible] tor of the Sanitation Division of th[illegible] Minnesota Department of Health, ha[illegible] been appointed by War Manpower Com[illegible] mission Chairman Paul McNutt to ser[illegible] on the newly-formed committee on sa[illegible] tary engineering for procurement an[illegible] assignment service.

Robert J. Milligan, assistant district en[illegible] gineer for the Texas highway departme[illegible] at Brownwood, Texas, has been name[illegible] acting district engineer serving for L[illegible] Ehlinger, who is now on duty with th[illegible] Navy in Hawaii.

Ancil L. Thomas, an employee in th[illegible] Harrison County engineer's office a[illegible] Logan, Iowa, has been named Harriso[illegible] County engineer to succeed A. W[illegible] Gaines, who is on leave.

ASHINGTON IGHLIGHTS

lure of OPA to issue amendments construction price order, Reg. 251, dicted (*ENR*, Feb. 25, p 271), does dicate any change of intention on part of the Price Administration. mendments are still scheduled for nce, but there are many yards of tape to be unwound.

endment of the project rating form, h, by which priority ratings are d to construction projects other than ing, are intended to simplify the rwork required. P-19-h may now r, in addition to construction mate- most of the equipment to be in- ed in the finished project and also s needed to carry on construction: l tools, construction machinery s, forms, scaffolding, etc. Construc- machinery and fuel are still ex- ed. The order is tightened somewhat a clause providing that only those erials specified in the P-19-h form be used in building the project, even gh the builder has additional ma- ls in stock.

FHA's authority to insure mortgages er the easy-term, no-down-payment e VI procedure will be increased m $800,000,000 to $1,200,000,000 er a bill which has been favorably orted to the Senate. The additional 0,000,000 of insurance authorization expected to cover mortgages on 85 cent of the 130,000 privately-financed ses, construction of which has been proved by WPB and which are not yet der construction.

Six of the concrete barges built by Maritime Commission at the Con- te Ship Constructors' yard in Cali- nia have been turned over to the vy and are now undergoing conver- n to Navy specifications. Navy spokes- n decline to reveal whether it is in- nded to take over any more of the ,000-ton concrete oil barges.

Evidence that publicly-financed hous- g has practically emerged from the ld of political controversy, and that a bstantial postwar program of public using is certain whatever the course national policies, is seen here in a peech recently made by Senator Robert aft. The Republican leader told the ational Association of Housing Officials at he regards housing as a proper field r government subsidy and that "the overnment can well afford to devote a ry substantial sum every year to pro- mote housing." The Senator, along with three Democrats, Wagner, Thomas and Ellender, is promoting a Congressional study of postwar housing prospects.

Advance engineering for a program of public works, carried through from site acquisition to the preparation of blueprints and contract specifications, so that actual construction can start immediately upon the cessation of hostilities, was urged last week by Maj. Gen. Philip B. Fleming, Federal Works Administrator, in an address before the Union League Club of Chicago.

The engineer registration law for the District of Columbia introduced into Congress last month by Rep. Herber (*ENR*, Feb. 11, p. 172) is given no chance of success as it is opposed both by the National Society of Professional Engineers and the National Council of State Boards of Engineering Examiners. These organizations object to the distinction between "professional engineers", who agree to have no financial connection with building material producers, and "engineers", who are not required to subscribe to such a pledge. The N.S.P.E. objects to exemption of structures under $50,000 and to a generally loose phrasing of exemption which apparently would permit patent attorneys, for instance, to practice engineering. If the Heber Bill is withdrawn, a more conventional measure probably will be introduced.

Legislation to prevent speculation in lands of the Columbia Basin area and to facilitate division of the land into homesteads became law last week when the President signed it. The bill permits the Bureau of Reclamation to buy up basin land at the dry price before it is irrigated.

Bridge and highway tolls have been exempted from price control by the OPA.

A bill appropriating $100,000,000 to finance immediate design of local, state, and federal public works to be undertaken after the war has been introduced by Senator Mead. The Senator is an administration stalwart whose views are not likely to meet the approval of the present anti-New Deal Congress.

Contracts held by the Bonneville Administration last year yielded $12,000,000 gross revenues, Power Administrator Paul J. Raver testified before an SEC meeting on reorganization of the Portland General Electric Power Co. Mr. Raver said material and construction contracts handled by the Bonneville Administration during 1942 totaled $31,000,000.

Expansion of reclamation urged to increase food

The Department of the Interior and the Bureau of Reclamation were thoroughly licked early this year in their efforts to justify continuation of a substantial program of reclamation construction as a contribution to power supply. The War Production Board, which does not expect a power shortage, cancelled priority ratings on most of the bureau's projected program, which stopped the work.

Now a new line of argument is being brought forward—food supply. The country is admittedly faced with a crisis in food this year, and Interior is now arguing that a program of reclamation can make a substantial contribution to food supply. In a voluminous statement from Secretary Ickes to Secretary of Agriculture Wickard, it is pointed out that the reclamation program now permitted by WPB will increase irrigated acreage by only about 3 percent over 1940. By resumption of work on 24 projects and starting up 15 new ones, the statement estimates that irrigated acreage could be increased 72 percent by 1945 and 192 percent by 1947.

This work, extending over five years, would require 245,266 tons of steel, 13,636,000 man-days of labor, and expenditure of $316,685,000. Only about half of the first year's money is available.

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Gold recovered from Friant Dam aggregate

When books were closed on the total amount of placer gold recovered from aggregate washed for concrete at Friant Dam, Cal., it was found that the gross returns had been about $200,000. At $35 per ounce, this represents some 5,428 oz. From this gross return was deducted the expenses involved in preliminary exploration, cost of plant and operation which totaled about $24,000. The net proceeds of $176,000 were divided equally among the Bureau of Reclamation and Griffith Co. and Bent Co., the contractors.

The aggregate from which the gold was washed came from gravel bars on the San Joaquin River below the dam. Some pockets of gravel produced as high as 18 cents per concrete yard, but the average was about 8½ cents per concrete yard which corresponded to only a little over 4 cents per ton.

Extraction of placer gold from aggregate being washed for concrete is also being carried on by the contractors on Shasta Dam in the Sacramento River below that structure. A progress report on the recovery of gold at Friant Dam was published in *Engineering News-Record*, Aug. 7, 1941, p. 197.

Icebreakers to open Mississippi waterway

Early opening of the upper Mississippi River waterway is to be attempted this year to help ease the transportation load on the railroads serving that part of the country. Normally, river transportation to St. Paul and Minneapolis does not open until some time in April, depending on when the first big spring thaw comes. In this way it is hoped to advance the opening several weeks.

In the light of experience gained this winter in keeping the Illinois waterway open with ice breakers, it is now proposed to equip the Federal Barge Line tug *Sawyer* and the U. S. Engineers' boat *The Dell Commune* with 85-ton icebreakers and to start them from Alton, Ill. about March 15 to break through to St. Paul and open the way for a large convoy of barges now assembled at Alton. These barges are loaded with coal and oil and will return with grain and raw materials. Between Dubuque, Iowa, and St. Paul, there are ten locks and dams that are expected to complicate the job of the icebreakers.

Storage capacity of the St. Paul marine terminal, lying westerly of the business center and between Minneapolis and St. Paul, is 66,000,000 gal. of oil and gasoline. To encourage early shipment of fuel into this terminal, a bill has been introduced into the Minnesota legislature, which is now in session, to reduce the assessed value of fuel in storage at the terminal on May 1 from 33-⅓ percent of its value, the rate now specified by law, to 10 percent.

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Port improvements to be made in Mexico

The Mexican government has announced its intention to invest $3,150,000 toward the improvement of two principal ports of the Isthmus of Techuantepec, Puerto, Mexico, on the Gulf of Mexico, and Salina Cruz, on the Pacific. This information comes from Ing. Modesto C. Rolland, director general of free ports, operating under the jurisdiction of the Ministry of Finance.

Work will soon be started on dredging the harbors, reconstructing wharves, breakwaters and warehouses. These ports are terminals of the National Railway of Tehuantepec.

Announcement also is made that plans are in the making for converting Topolobampo on the Pacific coast of Sinaloa state, into a first class port, as it will be a terminal of the extension of the Kansas City, Mexico and Orient Railway from central Chihauhua state. Government engineers are now preparing plans and drafting a budget for this work.

JOBS OF THE WEEK

IMPROVEMENTS, Maryland
Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded cont for the construction of improvements, to Corbetta Construction Co., New Y Estimated cost $5,500,000.

HOUSING, Pittsburgh, Pa.
Navarro Corp., Pittsburgh, Pa., has been awarded a contract for housing community center, by Public Housing Authority, New York at a cost of $2 820. Mitchell & Ritchie, Pittsburgh, Pa., are architects. A. Dzhay, Pittsb Pa., is engineer.

FACILITIES, Lakehurst, N. J.
Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded cont for additional facilities for lighter-than-air facilities, to Karno-Smith Co. Duffy Construction Co., Trenton. Estimated cost $2,000,000.

FLOATING DRY DOCKS, Galveston, Tex.
Bureau of Yards & Docks, Navy Dept., Washington, D. C., let contract 3,000 ton timber floating dry docks to Todd Galveston Dry Docks, Inc., Gal ton, at cost of $1,275,000.

CONSTRUCTION, Mississippi
Perry Construction Co., Philadelphia, Miss., has been awarded contract additional construction work Lauderdale County by U. S. Engineers, Mob Ala. Cost under $1,000,000.

HOUSING, Spokane, Wash.
Public Housing Authority, Seattle, Wash., received low bids for construct housing from Meyers Brothers, Los Angeles, Calif., at $1,741,300. Whitehe & Price, Spokane, Wash., are architects.

BUILDING, Massachusetts
U. S. Engineers, Boston, Mass., let contract for temporary buildings, Middle County, to J. E. Bennett Co., Boston, Mass. Estimated cost $500,000-$1,000,0

HOUSING, Washington
U. S. Maritime Commission, Washington, D. C., awarded contract for housi units and recreational buildings to Reimers & Jolivette, Portland, Ore., at c of $4,124,327. Wolff & Phillips, Portland, Ore., are architects.

HOUSING, Oregon
U. S. Maritime Commission, Washington, D. C., awarded contract for the co struction of housing units and mess halls to Reimers & Jolivette, Portland, Or at cost of $2,458,969. Wolff & Phillips, Portland, Ore., are architects. O. Al ander Mechlin, plant engineer.

IMPROVEMENTS, Washington
U. S. Engineer, Seattle, awarded contract for improvements in Spokane Cou to Northwest Pavers, Spokane. Estimated cost $1,000,000.

HOUSING, Sharon, Pa.
Public Housing Authority, New York, N. Y., received lowest bid from Ca Brothers and Singer, Inc., Mount Vernon, N. Y., for housing project $526,00 same project including community building $546,600. J. Hoover, Pittsburg Pa., is architect.

HOUSING, Las Vegas, Nev.
Vegas Village, Inc., will construct dwellings under contract let to Nord Construction Co., Los Angeles, Calif. Estimated cost $750,000.

HOUSING, Ohio
Public Housing Authority, Cleveland, O., received lowest bid from Cox Construction Co., Louisville, Ky., for temporary housing projects, at $580,00 Dayton Housing Architects, Dayton, O. are architects.

HOUSING, Washington
Strand & Son, Seattle, Wash., has been awarded contract for housing proje by King County Housing Authority, Seattle. Cost is $684,000. E. W. Morr & Associates, Seattle, are architects.

BUILDING, Kansas
A. Farnell Blair, Decatur, Ga., has been awarded contract for buildings U. S. Engineer, Kansas City, Mo. Estimated cost $600,000. Battey & Child Chicago, Ill., are architects.

Note—Additional bidding and contract news on many projects large and small appear in the Construc News section beginning on page 15.

NRPB reports on post-war ...sed to prod Congress

(Continued from page 9)

...nal and local hospitals and health ...ers, the preparation of plans and ...rams for "all kinds of socially useful ... other than construction," and the ...blishment of a permanent "Work ...inistration" under an appropriate ...ral agency to administer the provi... of jobs of socially desirable work for ...otherwise unemployed.

The board's "plans for action by state ... local governments and regions" em...size the "utmost importance" of re...nal developments such as were out...d in its recent reports upon the ...theast, Northwest and Arkansas Val... regions. It urges state and local gov...ments to take appropriate legislative ... administrative action to readjust war ...m towns, to prepare carefully planned ...grams, engineering plans and specifi...ions for needed postwar public works, ...ndertake large scale urban redevelop...nt including necessary enabling legis...ion, to construct improved highway air ... terminal facilities, to facilitate the ...struction of needed new housing and ... elimination of slums and to build up ...al reserves for postwar work through ...reased taxation and debt liquidation ...ring the war period.

Work relief policies

...n its findings and recommendations ... jobs and security through public-aid ...grams, the board directs particular ...ention to emergency work programs, to ...th training, social insurance and the ...pansion of social services. It recom...ends that a federal work agency ...arged with responsibility for develop... and operating work programs should ... established on a permanent basis to ...rk in close contact with the public ...rks programming division of the Na...nal Resources Planning Board, the ...reau of Employment Security and the ...cial Security Board as well as with ...propriate technical agencies and with ...te and local public works and welfare ...inistrations.

Among its recommendations relative ... the federal work agency are the fol...wing: (1) Standards of performance ...manded of project workers should be ...ose normally required in private in...stry and should be strictly enforced; ...2) rates of remuneration and conditions ... employment and hours of work should ...rallel as closely as possible those pre...ailing in private employment; (3) eligi...lity for employment on work programs ...ould be restricted to persons normally ...pendent upon full time employment ...nd those who are not entitled to receive ...nemployment compensation benefits or ...hose unemployment is likely to persist for an extended period of time; (4) eligibility for employment should be determined by relative employability and need for work; (5) all persons seeking work should be required to register at public employment offices, and access to the work program should be through the employment office; (6) major responsibility for the operation of work programs should remain with the federal government although every effort should be made further to develop cooperative relationships with states and localities; (7) major financial responsibility should be carried by the federal government. In sponsored programs, the share that sponsors are required to contribute should reflect the sponsor's financial capacity.

Expressing its belief in the broad objectives of an enlarged public-aid policy, the board states, "We fully recognize that our recommendations envision the attribution to government of a more active role in the economic life of the country. But the nature of the measures to be applied, in view of the size and national character of the problem leaves no alternative. As a democratic society, we must utilize every instrument available for grappling with the serious threat to our welfare and our national solidarity." The board also points out that "If government is to be forbidden to operate projects which yield products of the type produced by private industry, it is difficult to see how one of the major advantages of the work program can be secured: the maintenance and the creation of skills and work habits which will be in demand when private industry recovers; nor if the scope of public projects is to be left severely proscribed can it be expected that work programs will attain another of their major objectives: the maintenance of the respect of the worker both for himself and for the job on which he is employed. The public must therefore be willing to countenance a diversification of the types of projects undertaken by government."

New York Central engineer of bridges retires

More than 100 friends and officers of the New York Central System met on Feb. 25, at a luncheon to pay tribute to A. W. Carpenter, retiring engineer of bridges, who had served the system for the last 43 years.

Among those present were, left to right, H. A. Stahl, retired assistant treasurer; S. E. Armstrong, engineer, maintenance of way for the system; F. B. Hank, assistant to the vice president and general manager; G. N. Edmondson, engineer, maintenance of way; A. W. Carpenter, retiring chief engineer of bridges; R. E. Dougherty, vice-president, improvements and developments; J. H. Kelly, engineer of track; G. W. Kittredge, retired chief engineer, now 86 years old; J. W. Pfau, chief engineer; H. T. Welty, engineer of structures, and J. H. Roach, chief valuation engineer.

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Large scale housing provided at Willow Run

Accommodations for 8,000 families are being provided near the Willow Run bomber plant in the Detroit area, and it is expected that approximately 3,000 more such units will be placed under contract within the next few weeks. Under such a program it is believed that the housing needs, at least of family workers, will be satisfied by the latter part of this summer. As the housing is completed, accommodations will be provided for families now living under temporary conditions in trailers and basements in the vicinity of the plant. This will indirectly assist in the solution of the critical health problem in this entire area. The Federal Public Housing Authority, which is constructing the housing being built with public funds, has taken bids for a sewage disposal plant, which will treat all sewage from government housing projects.

OBITUARY

Joseph Holland Tessier, civil engineer, died Mar. 2 at Ottawa, Ont., at the age of 84. Mr. Tessier was at one time chief engineer of construction of the Canadian National Railways, and later was associated with the Dominion Department of Railways and Canals.

John F. Williams, 66, civil engineer of Piqua, Ohio, died suddenly of a heart attack at his hotel in Pittsburgh, Pa., Mar. 2.

Arthur W. Von Der Linn, who for the past ten years was associated with the Wm. P. McDonald Corp., Flushing, N. Y., as engineer and technical adviser, died Feb. 20.

Richard Calvin Huston, well known as a civil engineer up to 1920, when he retired from the profession to enter the ministry, died Mar. 1 at Miami, Fla. For the past six years he had been pastor of the First Baptist Church of Miami.

Harry W. Kimley, for 30 years employed in the office of the Mahoning County, Ohio engineer's office, died Feb. 23. He had been chief draftsman of the engineering department for a number of years.

Thomas Dwyer, retired contractor, who built some of New York City's most prominent structures, died Feb. 27. He was 81 years old.

Owen Brooke Evans, 63, retired engineer, died recently at his home in Germantown, Pa. Before his retirement, Mr. Evans was engineer of works at the Philadelphia Gas Works.

Hanson L. Harbin, 77, creator of the Lookout Mountain Incline at Chattanooga, Tenn., known as the world's steepest railroad, died March 11 at his home on the mountain. The design worked out by Mr. Harbin, whereby a three-rail road is used with one car pulled up and one down at the same time, meeting halfway where a switch brings in a fourth rail and enables the cars to pass, was unique. The design has been copied for inclines at Florence, Italy, and Shanghai, China. The system does away with the necessity for a two-track road which would almost double the cost of construction and maintenance.

Henry Van der Hart Roclofs, 55, widely known engineer, died March 8 at Buffalo, N. Y. In 1935 Mr. Roclofs was appointed a construction engineer in the public works division of the U. S. Treasury Department. He was the chief engineer of bridge construction during the building of the Cuban Central Highway.

Fred C. Ebert, 60, senior hydraulic engineer in the Los Angeles office of the U. S. Geological Survey, died, Feb. 24.

W. H. Young, 64, head of the Atlanta, Ga., city construction department for 25 years, died March 9.

W. R. Graham, 92, of Waynesboro, Miss., who served 34 years as county surveyor of Wayne County, died March 6.

Howard C. Fisher, 50, Springfield, Ill., engineer with the state division of highways for the past 22 years, died March 8. He was a graduate of Bucknell University.

Edward A. Ross, 46, died March 10. He was president of J. A. Ross & Co., Chicago, Ill. His firm recently has been constructing airports for the army air force.

Edward J. McGrew, 69, former member of the Missouri state highway commission and for years mayor of Lexington, Mo., died Feb. 24. He was one of the early workers for good roads and served on the highway commission from 1926 to 1929.

John Debo Galloway, 73, nationally prominent engineer of Berkeley, Calif., died March 10. He was a graduate of Ross Polytechnic Institute, Terre Haute, Ind., in 1899. Mr. Galloway had been identified with such well known projects as the Bay Bridge, Shasta Dam and San Mateo Bridge.

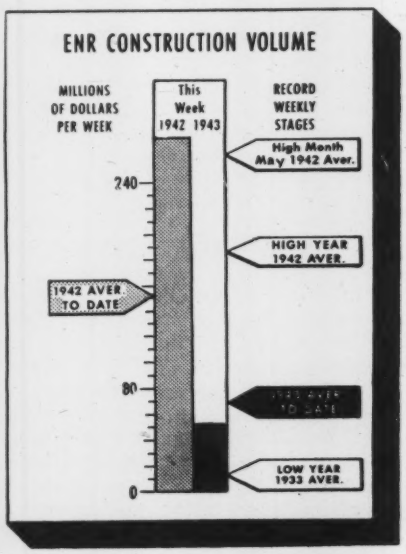
CONTRACTS AND CAPITAL

CIVIL ENGINEERING construction volume for the week totals $55,634,000, a decrease of 38 percent from the preceding week, and 80 percent below the volume for the corresponding 1942 week. Private work is 1 percent below a week ago, and 67 percent below a year ago. Public construction is 40 and 80 percent lower, respectively, than last week and last year, as both federal work and state and municipal construction are lower.

The current week's volume brings 1943 construction to $764,911,000, an average of $69,537,000 for each of the eleven weeks of the year. On the weekly average basis, the 1943 total is 54 percent below the $1,815,973,000 reported for the twelve-week period last year. Private construction, $66,337,000, is 57 percent lower, and public construction, $698,574,000, is down 54 percent when adjusted for the difference in the number of weeks.

In the classified construction groups gains over last week's totals are in commercial building and large-scale private housing, and earthwork and drainage. All classes of work are below their respective totals of a year ago.

New capital for construction purposes for the week, $555,000, is made up entirely of state and municipal bonds sales. The week's financing brings 1943 volume to $59,314,000 for the eleven-week period, a figure that compares with $1,412,006,000 for the twelve weeks in 1942.



CONTRACTS
(Thousands of dollars)

	Week Ending Mar. 19 1942	Mar. 11 1943	Mar. 1 1943
Federal	$246,829	$83,828	$49,27
State & Municipal	13,350	2,089	1,91
Total public	$260,179	$85,917	$51,19
Total private	13,523	4,483	4,44
TOTAL	$273,702	$90,400	$55,63
Cumulative 1943 (11 weeks)			$764,91
1942 (12 weeks)			$1,815,97

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1942 12 weeks	Cumulative 1943 11 weeks
NON-FEDERAL	$170,051	$59,31
Corp. Securities	56,560	.....
State & Mun.	99,242	54,72
R.F.C. loans	14,249	1,59
FPHA loans	.....	3,08
FEDERAL	$1,241,955	.....
TOTAL CAPITAL	$1,412,006	$59,31

ENR INDEX NUMBERS
Index Base = 100

		1913	192
Construction Cost	Mar. '43	285.24	137.1
Building Cost	Mar. '43	226.66	122.5
Volume	Jan. '43	231	101

FHA MORTGAGES

	Week Ending Mar. 14 1942	Mar. 6 1943	Mar. 1 194
Appraisal Selected for			
Title II	$17,103	$4,743	$5,33
Title VI	$24,562	$13,151	$15,80

* Subject to revision.

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